

some of its angular prolongations, more upon the observations of 1869, when the sky was exceptionally clear, than upon anything seen at this time; and yet all the observations of this year, so far as I can see, accord well enough with the idea.

The two faint lines which I saw last year between D and 1474, and which I thought might also be corona lines, were not seen this year by any one, so far as I can learn. I certainly saw two such lines last year, but I was not then at all positive about their belonging to the corona (I have felt somewhat annoyed by finding them put on the same footing as 1474 in several publications of the last year or two), and my present impression is that they were two of the faint iron lines that often appear in protuberances in that portion of the spectrum.

The question has been raised whether the corona line *exactly* coincides with the 1474 dark line in the solar spectrum. The difference, if any (and I have not found the slightest reason to suspect the least want of coincidence in observations with the whole dispersive power of 13 prisms), is less than $\frac{1}{10}$ of one division of Kirchhoff's scale.

Just before the totality began, I placed the slit of my spectroscope exactly tangential to the sun's limb at the point which would be last covered, and brought the 1474 line, already bright, as is usually the case at the base of the chromosphere, exactly to the cross hairs. After the totality had fairly begun, I moved the equatorial in right ascension until the slit was more than 16' east of the sun's limb, and the line remained continually visible, though of course growing fainter as the distance from the sun increased. There is not the slightest possibility of mistake, nor of error beyond the limit named, *i.e.*, $\frac{1}{10}$ of one division of Kirchhoff's scale.

And now a few words in relation to the nature of the Corona. It seems to me to be a complex phenomenon, made up of at least four, perhaps five different elements; and in the main I concur with the views put forth by Mr. Lockyer in a recent number of NATURE, with the exception that I should be disposed to assign a greater relative importance to the truly solar portion of the phenomenon than he appears to do.

1st. We have, I think, surrounding the sun, beyond any further reasonable doubt, a mass of self-luminous gaseous matter, whose spectrum is characterised by the green 1474 line. The precise extent of this it is hardly yet possible to consider as determined, but it must be many times the thickness of the red hydrogen portion of the chromosphere: perhaps, on an average, 8' or 10', with occasional horns of twice that height. It is not at all unlikely that it may even turn out to have *no upper limit*, but to extend from the sun indefinitely into space.

2nd. This region undoubtedly reflects to us a certain amount of the ordinary photospheric sunlight. This reflected light is of course polarised radially to a considerable extent. Its spectrum ought to show the ordinary dark lines, but they are partly masked in the manner Mr. Lockyer has so happily explained, and partly by the faintness of the spectrum.

3rd. Our own atmosphere, even when clearest, must apparently extend this corona, both outwards, and inwards upon the moon's disc. Since, however, the inner edge of the coronal ring is far the brightest, the inward extension of the corona should be most marked, except at the very

beginning or end of totality, and I have no doubt it is: that is to say, at the middle of totality the illumination of the moon's disc gives a somewhat exaggerated measure of the effect of our own atmosphere in extending the corona outwards. Accordingly, I am disposed to think the effect of the atmosphere (when clear) is a very subordinate one, since in 1869 the light upon the moon's disc was only very trifling compared with that even a whole degree from the sun. This atmospheric light would also be polarised radially. Its spectrum would be mainly that of the chromosphere, prominences, and "leucosphere" combined, a discontinuous bright line spectrum.

4th. There must be a large subjective element, for two even skilled observers, standing side by side, describe phenomena differing in very essential points.

5th. I am somewhat inclined to think with Oudemans (see his paper published in NATURE Nov. 10) that possibly *cosmical dust* between us and the moon may play an important part. Assuming a light cloud of such matter, one or two hundred thousand miles above the earth's surface and of great thickness, it becomes easy to account for the straight dark streaks, the varying form (if it does vary), and many other puzzling phenomena of the corona-phenomena which can hardly be produced by portions of our own atmosphere deeply immersed in the lunar shadow, but which, I own, seem to me now less aurora-like and less certainly solar than they did a year ago. I do not see how optical tests by polariscope and spectroscope could discriminate between the effects of such a cloud and those of our own atmosphere.

C. A. YOUNG

POPULAR NAMES OF BRITISH PLANTS

The Popular Names of British Plants. By R. C. A. Prior, M.D., F.L.S. Second Edition. (Williams and Norgate.)

THERE are many botanists who know little of the English names of Plants; and there are many who know these intimately, yet are not botanists. Both classes will welcome this comprehensive volume: and those who possess neither a philosophical nor a popular knowledge of the subject, will yet find abundant interest in a book, which is the work of an accurate scholar and philologist, as well as of a scientific botanist.

Most interesting, and perhaps least expected, is the light which these names throw upon the history of early civilisation. Many of them date from a period antecedent to the European settlement of the Aryan race, and enlighten us as to the habits of our remote ancestors some thousand years ago. We discover from them that the men who continuously advanced through many countries, from the confines of India to the British Islands, were no race of savages, but a comparatively civilised community: that they understood letters; that they had a knowledge of the useful metals; that they possessed the principal domestic animals; that they cultivated the oak, the beech, the birch, the hawthorn, the apple; grew wheat, barley, oats, rye, beans; built timber houses and thatched them; hedged their fields and fenced their gardens.

In a later class of names, which betray the intercourse of our forefathers with Roman cultivation and Grecian poetry, many a strange piece of myth or history lies em-

balmed. Thus the *Centaury* is the plant with which the Centaur Chiron healed the wound received from the poisoned arrow of Hercules. The beautiful and rare wild *Pæony* recalls Pæon, the physician-god of Homer, who healed the bellowing Ares when smarting from the spear of Diomed. The *Juno's Rose*, or tall white lily, preserves a story curiously transformed in later times from the Pagan to the Roman Catholic Mythology. The *Treacle-mustard* (*Erysimum cheiranthoides*) is the "Theriacum," invented as an antidote by the Emperor Nero's physician and reappearing long afterwards as an ingredient in the Orvietan, or Venice Treacle. Mediæval tales and legends in abundance find illustration from the same source. The *Carlisle Thistle* is the herb which miraculously healed a pestilence that attacked the army of Karl the Great. The sea-loving *Samphire* is corrupted from Saint Pierre, the fisherman Apostle. The *Flower-de-Luce*, or Iris, was the device of Louis VII. The *Filbert* commemorates the horticultural skill of king Phillibert. The *Herb Robert* cures a disease named after Duke Robert of Normandy. The *Margarette*, or Daisy, owes its name to St. Margaret of Cortona, known to the readers of Mrs. Jameson.

More than one curious superstition is embalmed in well-known names. The *Celandine* is an altered form of the Greek "Chelidon," a swallow, because with its yellow juice the swallows were supposed to restore sight to their blinded young ones. The *Hawk-weed* records a like belief respecting the Hawk. The *Fumitory* (fume-terre) was thought to be produced without seed by vapours rising from the earth.

Many names, as *Wound-wort*, *Tetter-wort*, *Pile-wort*, *Nipple-wort*, have survived the ancient faith in their medical efficacy. And here comes in the strange principle of nomenclature, known as the "Doctrine of Signatures." Where the external appearance of a plant resembled any disease, or any part of the human body liable to a disease, such resemblance was taken as an indication of its especial healing virtue. The spotted leaves of the *Lung-wort* must be a specific, it was thought, for tubercular disease of the lungs; the scaly pappus of *Scabious* for cutaneous eruptions; the hard stony seeds of the *Gromwell* for stone in the bladder; the throat-like corolla of the *Throat-wort*, or Canterbury bell, for sore throats; the knotty tubers of *Scrophularia* for scrophulous glands. The pretty *Toad-flax* of our walls and hedges owes its name to a strange mistake. Believed in early times to be a cure for a complaint known as "Buboes," it received the Latin name of "Bubonium." A confusion between *Bubo* and "Bufo," Latin for a Toad, gave birth to its present name; and stories were not long wanting that sick or wounded Toads had been seen to eat of it and to recover health.

Similar distortions occur in names not medically expressive. *Apricot*, connected ordinarily with the adjective "Apricus," sunny, is a corruption through the Spanish and Italian of "Præcoqua," early; having been looked upon as an early peach. *Sweet William* is transformed from "Æillet," a little eye; *Pink* is shortened from the Low German "Pinksten," Whitsuntide, a name due to the season of its blossoming. *Gilliflower* comes through *Garoflée* from "Caryophyllus," a clove. *Carnation* is from "Coronation," its flowers being used in chaplets. *Mari-gold* is Marsh-gold; *Cowslip* is "Hose-flap," applied

originally to the large flannelly leaf of the Mullein; *Dame's Violet* from "Damascene" Violet; the blunder being kept up, as is often the case, in the Latin "Hesperis matronalis." *Hip* is the same word with *Jujube*; *Hawthorn* is "Hedge-thorn;" *London Pride* is named not from the smoky metropolis in which it thrives, but from a Mr. London, who introduced it. *Snout-dragon* is "Snout-dragon." *Daffodil*, more properly *Daffadowndilly*, is a combination of "Sapharoun" or "Saffron-lily" with "Asphodelus" the old English "Affodilly." With the taste for alliteration often shown in popular names, the Sapharoun-lily, blending with Affodilly, became by a mutual compromise Daffadowndilly, whence Daffodilly and Daffodil. *Peach* (Persicus), *Damson* (Damascenus), *Shalot* (Ascalonicus), and *Spinach* (Hispanicus), retain in their names dim memories of the lands of their birth. But the most curious instance of blundering is the *Jerusalem Artichoke*. It is a sun-flower, not an artichoke; but its tubers resemble the artichoke in flavour. From its Italian name "Girasole," turn-to-the-sun, came "Jerusalem;" and by a further quibble the soup which is made from it is called "Palestine soup."

Of the miscellaneous names many are equally interesting. The *Laburnum*, closing its petals at night like a tired labourer; the *Campion*, which crowned the champion of the tournament; the *Lady's Bedstraw*, recalling the days when mattresses were not, and when this fragrant Galium was used for ladies' couches; the *Heartsease*, with its many amorous synonyms; the *Shamrock*, concerning whose botanical identity no two Irishmen can agree; the *Lavender*, or Washerwoman, scenting freshly washed linen; the *Ozier*, from the oozy beds in which it grows, are a few out of countless specimens. The philologist may delight to trace the root of *Apple* from the Zend and Sanscrit "Ap" to the Latin "Pa" in "Padus," "Po" in "Pomum" and "Poto." Those familiar with Hans Andersen will read with fresh enjoyment the tale of the "Wild Swan," when they learn that the *Nettles*, which the Princess had to weave into shirts, are derived from the verb "ne," to spin or sew. On the other hand, some pretty time-honoured traditions are ruthlessly swept away. The *Narcissus* is referred, not to the enamoured Grecian youth, but to the Sanscrit "Nark" or Hell; and the protesting lover of the classics is reminded "that Proserpine was gathering Narcissi long before Narcissus was born." The *Fox-glove*, is not, as we had loved to think, like the *Troll-flower* and *Pixie-stool*, the "Folks'" or Fairies' "Glove"; but the Foxes' *Glew*, or Tintinnabulum, with its ring of bells, hung on an arched support. Worst of all, the charming story of the Forget-me-not, current in every European language, is a later legend framed to meet a name already extant. For the original use of the name, its first curious transference of allusion, its final attachment to a river-side flower, and the narrative of the drowning lover, which readily grew up to adorn it, we must refer our readers to Dr. Prior's book. They will be surprised to find a treatise on Botany poetical, and a Dictionary light reading. They will learn how much a technical subject may be enlivened by varied accomplishments in him who treats it; they will see that in the Science of Botany, as in every other Science, the widest culture brings about the most telling and effective teaching.

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